

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the above-referenced application:

1 1. (Currently amended) A system for converting first and second
2 signals representative of payload and supervisory information, respectively, between
3 an electrical format and a WDM aggregated optical format, the system including:

4 [-] at least one first converter for converting said first signal between said
5 electrical format and a first, disaggregated optical format,

6 [-] at least one second converter for converting said second signal between
7 said electrical format and a second, disaggregated optical format, and

8 [-] at least one optical WDM converter for converting said first and second
9 signals between said first and second disaggregated optical formats and said WDM
10 aggregated optical format, wherein characterised in that at least one of said at least
11 one first converter, said at least one second converter and said at least one optical
12 WDM converter are in a hermetic enclosure and wherein said at least one first
13 converter, said at least one second converter and said at least one optical WDM
14 converter are integrated to a single self-contained module by means of signal
15 propagation paths that are exempt from splices.

1 2. (Currently amended) The system of claim 1, characterised in that
2 wherein said first converter and said second converter have associated signal
3 processing electronics, said signal processing electronics being integrated to said
4 single self-contained module, said signal processing electronics generating said first
5 and said second signals representative of said payload and said supervisory
6 information, in said electrical format.

1 3. (Currently amended) The system of claim 1, characterised in that
2 wherein said optical WDM converter includes a beam splitter.

1 4. (Currently amended) The system of claim 3, characterised in that
2 wherein said beam splitter has associated an optical connector for conveying said first
3 and said second signals in said WDM aggregated optical format, and in that wherein
4 said beam splitter is arranged to transfer optical radiation between said first converter
5 and said optical connector.

1 5. (Currently amended) The system of claim 3, characterised in that
2 wherein said beam splitter has associated an optical connector for conveying said first
3 and said second signals in said WDM aggregated optical format, and in that wherein
4 said beam splitter is arranged to define an optical signal reflection path between said
5 second converter and said optical connector.

1 6. (Currently amended) The system of claim 3, characterised in that
2 wherein said beam splitter has associated radiation focusing elements interposed
3 between said beam splitter and said first and said second converter.

1 7. (Currently amended) The system of claim 4, characterised in that
2 it includes a further including a focusing element interposed between said beam
3 splitter and said optical connector for focusing onto said optical connector optical
4 radiation propagating from said beam splitter.

1 8. (Currently amended) The system of claim 7, characterised in that
2 it includes further including an optical isolator interposed between said beam splitter
3 and said further focusing element.

1 9. (Currently amended) The system of claim 1, characterised in that
2 wherein said first converter and said second converter include laser sources driven
3 with said first and said second signals in said electrical format, respectively, and in
4 that wherein said optical WDM converter includes a WDM combiner to combine said
5 first and said second signals in said first disaggregated optical format and said second

6 disaggregated optical format to produce said WDM aggregated optical format, the
7 system thus comprising a transmitter module.

1 10. (Currently amended) The system of claim 1, ~~characterised in that~~
2 wherein said optical WDM converter includes a WDM splitter for de-multiplexing
3 said WDM aggregated optical format into said first disaggregated optical format and
4 said second disaggregated optical format, and ~~in that~~ wherein said first converter and
5 said second converter include photoelectric converters for converting said first
6 disaggregated optical format and said second disaggregated optical format into said
7 first and second signals in said electrical format, the system thus comprising a
8 receiver module.

1 11. (Currently amended) The system of claim 1, ~~characterised in that~~
2 ~~it includes~~ further including:

3 [-] a pair of said first converters in the form of a first laser source and a first
4 photoelectric converter, respectively;

5 [-] a pair of said second converters in the form of a second laser source and a
6 second photoelectric converter, respectively; and

7 [-] a pair of said optical WDM converters, in the form of a WDM combiner
8 and a WDM splitter, respectively;

9 ~~the arrangement being~~ such that said first laser source and said second laser
10 source are arranged for converting a first pair of first and second signals
11 representative of payload and supervisory information, respectively, from said
12 electrical format into a first pair of first disaggregated optical format and second
13 disaggregated optical format signals and said WDM combiner is adapted to convert
14 said first pair of first and second disaggregated optical format signals into a first
15 WDM aggregated optical format signal, and wherein [-] said WDM splitter is adapted
16 to convert a second WDM aggregated optical format signal into a second pair of first
17 and second disaggregated optical format signals, and said first photoelectric converter
18 and said second photoelectric converter are adapted to convert said second pair of
19 first and second disaggregated optical format signals into a second pair of first and

20 second signals representative of payload and supervisory information in said electrical
21 format, the system thus comprising a transceiver module.